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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,683	03/23/2001	James Thomas Edward McDonnell	B-4110 618604-0	5208

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EXAMINER

DADA, BEEMNET W

ART UNIT	PAPER NUMBER
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2135

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DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,683

Applicant(s)

MCDONNELL ET AL.

Examiner

Beemnet W Dada

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-30 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5-7, 9.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-30 have been examined.

Claim Objections

2. Claim 5 objected to because of the following informalities: Claims 5 is missing a period. Appropriate correction is required.
3. Claims 17 and 18 are objected to because of the following informalities: Claims 17 and 18 are identical. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 8, 10 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Havinis et al. (hereinafter refereed to as Havinis) (US Patent No. 6,671,377 B1).

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6. As per claim 1, Havinis teaches a method of providing location data about a mobile entity, wherein the location data is provided in encrypted form by a location server to a recipient that is one of the mobile entity or a service system usable by the mobile entity (i.e., encrypting network position information by SMLC 270, MSC 14 and BSC 23 and providing it to recipient Mobile Station MS 20, figures 3, 4a, and 4b) [column 5, lines 15-30 and lines 45-60], the location data being encrypted such that it can only be decrypted using a secret available to a decryption entity that is not under the control of the recipient (i.e., SMLC 270, MSC 14 and BSC 23 in association with authentication center AuC 27 generate a decryption key to encrypt location data and transmit it to recipient MS 20) [column 5, lines 45-67 and column 6, lines 1-24], whereby involvement of the decryption entity is necessary to decrypt the location data (providing the decryption key by the decryption entity to recipient MS 20 is necessary to decrypt location information at the recipient) [column 5, lines 45-62].

7. As per claims 3 and 10, Havinis teaches the method as applied above. Furthermore, Havinis teaches the method wherein the recipient is the mobile entity / service system and the decryption entity is under the control of the location server or an agent of the latter [column 5, lines 20-30 and lines 45-62].

8. As per claim 8, Havinis teaches the method as applied above. Furthermore, Havinis teaches the method wherein the recipient is the mobile entity and the decryption entity is a service system to which the mobile entity passes the encrypted location data in association with a service request [column 5, lines 37-50].

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9. As per claims 17 and 18, Havinis teaches the method as applied above.

Furthermore, Havinis teaches the method wherein the recipient is the service system and the decrypting entity is the mobile entity, the latter having received the encrypted location data from the service system [column 5, lines 20-67].

10. As per claim 19, Havinis teaches the method as applied above. Furthermore, Havinis teaches the method wherein involvement of the decryption entity to decrypt the location data results in the generation of a billing record [column 3, lines 41-49].

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2, 4, 5-7, 9, 11-6, and 20-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Havinis et al. (US Patent No. 6,671,377 B1) in view of Numao (US Patent No. 6,377,688 B1).

13. As per claim 23, Havinis teaches a method of providing location data about a mobile entity from a location server to a service system, wherein:

in response to a request for location data about the mobile entity, the location server obtains the data, encrypts it in such a way that it can only be decrypted using a

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secret known to a decryption entity associated with the location server, and sends out the encrypted location data recipient (i.e., SMLC 270, MSC 14 and BSC 23 in association with authentication center AuC 27 generate a decryption key to encrypt location data and transmit it to recipient MS 20) [column 5, lines 45-67 and column 6, lines 1-24].

Furthermore, Havinis teaches the arrangement whereby involvement of the decryption entity is necessary to decrypt the location data (providing the decryption key by the decryption entity to recipient MS 20 is necessary to decrypt location information at the recipient) [column 5, lines 45-62]. Havinis does not explicitly the service system receives the encrypted location data and sends it to the decryption entity for decryption and return. However, Numao teaches a cryptographic communication system wherein a decryption entity (i.e., decryption server) receives encrypted data from a recipient for decryption and return [column 3, lines 4-30]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a service system receives the encrypted location data and sends it to the decryption entity for decryption and return as per teachings of Numao into the location data encryption / decryption system of Havinis, because in a system having high level of security cryptographic communication can be implemented in a separate entity than the receiver, allowing location data to be decrypted at a decryption entity different from the recipient.

14. As per claim 24, Havinis teaches an arrangement for providing location data about a mobile entity, the system comprising:

a location server for providing said location data in encrypted form requiring knowledge of a secret to decrypt it [column 5, lines 15-30 and lines 45-60];

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a recipient for receiving the encrypted location data from the location server, the recipient being one of the mobile entity or a service system usable by the mobile entity (i.e., encrypting network position information by SMLC 270, MSC 14 and BSC 23 and providing it to recipient Mobile Station MS 20, figures 3, 4a, and 4b) [column 5, lines 15-30 and lines 45-60]; and

a decryption entity that is not under the control of the recipient and to which said secret is available (i.e., SMLC 270, MSC 14 and BSC 23 in association with authentication center AuC 27 generate a decryption key with secret available to AuC 27) [column 5, lines 45-67 and column 6, lines 1-24];

Furthermore, Havinis teaches the arrangement whereby involvement of the decryption entity is necessary to decrypt the location data (providing the decryption key by the decryption entity to recipient MS 20 is necessary to decrypt location information at the recipient) [column 5, lines 45-62]. Havinis does not explicitly teach the recipient being operative to pass the encrypted location data directly or indirectly to the decryption entity for decryption. However, Numao teaches a cryptographic communication system wherein a decryption entity (i.e., decryption server) receives encrypted data from a recipient for decryption and return [column 3, lines 4-30]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a decryption entity for decrypting encrypted data sent from a recipient as per teachings of Numao into the location data encryption / decryption system of Havinis, because in a system having high level of security cryptographic communication can be implemented in a separate entity than the receiver, allowing location data to be decrypted at a decryption entity different from the recipient.

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15. As per claim 2, Havinis teaches the method as applied to claim 1 above.

Furthermore, Havinis teaches the arrangement whereby involvement of the decryption entity is necessary to decrypt the location data (providing the decryption key by the decryption entity to recipient MS 20 is necessary to decrypt location information at the recipient) [column 5, lines 45-62]. Havinis does not explicitly teach the encrypted location data is decrypted by the decryption entity with explicit or implicit authorization from the mobile entity. However, Numao teaches a cryptographic communication system wherein a decryption entity (i.e., decryption server) receives encrypted data from a recipient for decryption and return [column 3, lines 4-30]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a decryption entity for decrypting encrypted data sent from a recipient as per teachings of Numao into the location data encryption / decryption system of Havinis, because in a system having high level of security cryptographic communication can be implemented in a separate entity than the receiver, allowing location data to be decrypted at a decryption entity different from the recipient.

16. As per claims 4, 5, 7, 9, 11, 12, 14, 21 and 22, the combination of Havinis and Numao teaches the method as applied to above. Furthermore, Havinis teaches the arrangement whereby involvement of the decryption entity is necessary to decrypt the location data (providing the decryption key by the decryption entity to recipient MS 20 is necessary to decrypt location information at the recipient) [column 5, lines 45-62].

Havinis does not explicitly teach the encrypted location data is decrypted by the decryption entity with request from a recipient (mobile entity or service system usable by the mobile entity). However, Numao teaches a cryptographic communication system wherein a decryption entity (i.e., decryption server) receives encrypted data from a

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recipient for decryption and return [column 3, lines 4-30]. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a decryption entity for decrypting encrypted data sent from a recipient as per teachings of Numao into the location data encryption / decryption system of Havinis, because in a system having high level of security cryptographic communication can be implemented in a separate entity than the receiver, allowing location data to be decrypted at a decryption entity different from the recipient.

17. As per claims 6, 13 and 15, the combination of Havinis and Numao teaches the method as applied above. Furthermore, Havinis teaches authenticating the mobile station in which the location data relates by the service station and authentication center [column 5, lines 45-57].

18. As per claim 16, the combination of Havinis and Numao teaches the method as applied above. Furthermore, Havinis teaches the system wherein the service system is a location data archive system [column 5, lines 32-44].

19. As per claim 20, the combination of Havinis and Numao teaches the method as applied above. Furthermore, Havinis teaches the method wherein involvement of the decryption entity to decrypt the location data results in the generation of a billing record [column 3, lines 41-49].

20. As per claim 25, the combination of Havinis and Numao teaches the arrangement as applied above. Furthermore, Havinis teaches the recipient is the mobile

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entity / service system and the decryption entity is under the control of the location server or an agent of the latter [column 5, lines 20-30 and lines 45-62].

21. As per claim 26, the combination of Havinis and Numao teaches the arrangement as applied above. Furthermore, Havinis teaches the recipient is the mobile entity and the decryption entity is a service system to which the mobile entity passes the encrypted location data in association with a service request [column 5, lines 37-50].

22. As per claim 27, the combination of Havinis and Numao teaches the arrangement as applied above. Furthermore, Numao teaches a cryptographic communication system wherein a decryption entity (i.e., decryption server) receives encrypted data from a recipient for decryption and return [column 3, lines 4-30].

23. As per claims 28-30, the combination of Havinis and Numao teaches the arrangement as applied above. Furthermore, Havinis teaches the recipient is the mobile entity / service system and the decryption entity is under the control of the location server or an agent of the latter [column 5, lines 20-30 and lines 45-62].

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO form 892.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beemnet W Dada whose telephone number is (703) 305-8895. The examiner can normally be reached on Monday - Friday (8:30 am - 6:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703) 305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Beemnet Dada

August 3, 2004



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